WHAT IS CLAIMED IS:

1. A piezooptic device comprising a first element of porous crystalline material, a second element being attached to, or integrally formed with, said first element, and a light source, such that subjecting said first element to light originating from said light source results in a strain induced by said first element on said second element.

2. The piezooptic device of claim 1, wherein said porous crystalline material is selected from the group consisting of porous silicon, or other material with conductive channels and isolating channels such as spaces.

3. The piezooptic device of claim 1, wherein said second element is made of a crystalline material.

4. An adaptive reflector comprising the piezooptic device of claim 1, and a reflecting surface attached thereto.

5. The adaptive reflector of claim 4, wherein said reflective surface is formed as a reflective coat over said first layer.

6. The adaptive reflector of claim 4, wherein said reflective surface is designed to reflect light waves.

7. The adaptive reflector of claim 4, wherein said reflective surface is designed to reflect micro waves.

8. The adaptive reflector of claim 4, wherein said reflective surface is designed to reflect radio waves.

9. A method of producing a piezooptic device comprising the steps of attaching to, or integrally forming with, a first element of porous crystalline material, a second element, and providing at least one light source, such that subjecting said first element to light originating from said at least one light source results in a strain induced by said first element on said second element.

10. The method claim 9, wherein said porous crystalline material is selected from the group consisting of porous silicon, or other material with conductive channels and isolating channels such as spaces.

11. The method of claim 9, wherein said second element is made of a crystalline material.

12. A method of straining a porous crystalline material element, the method comprising the step of subjecting the porous crystalline material element to light.

13. A method of relaxing a strained porous crystalline material element which is subjected to light, the method comprising the step of preventing the light from impinging on the strained porous crystalline material element.

14. A piezooptic device comprising an element of porous crystalline material and at least one light source being in lighting distance

therefrom, such that subjecting said element to light via said light source results in a strain developing in said element.

15. A method of inducing strain in a first element, the method comprising the steps of attaching to the first element, or integrally forming with the first element, a second element of porous crystalline material and subjecting said second element to light.

16. The method of claim 15, wherein said porous crystalline material is selected from the group consisting of porous silicon, or other material with conductive channels and isolating channels such as spaces.

17. The method of claim 15, wherein said second element is made of a crystalline material.